GUIDELINE OF INTEREST RATE RISK MANAGEMENT

ONE. Generel provisions

1. The guideline is aimed at defining responsibilities of Bank of Mongolia, Executive Director, Board of Director, Asset and Liability Management Committee, Internal Control unit, Auditors to carry out activities of implementing and monitoring the Interest rate risk management.

TWO. Rights and duties of Board of Directors

2. The board of directors of the Bank / hereinafter referred to as the board/ has the following rights and duties:

2.1. To appoint a member of Assets and liability Management Committee.

2.2. To approve a regulation on Interest rate risk management formulated by Asset and liability Management Committee

2.3. To make consultations and approve inspection reports and documents prepared by Internal Control Agency on Interest rate risk management

2.4. To review reports submitted by Asset and liability Management Committee and make amendments to the regulation on interest rate risk management if needed.

THREE. Assets and liability Management Committee of the Bank

3. Following directors and officials shall be a member of Asset and liability Management Committee.

3.1. Executive Director
3.2. Associate Director
3.3. Director of Accounting Department
3.4. Director of Investment Department
3.5. Director of Loan Department
3.6. Director of Treasury Department
3.7. Others

4. Assets and liability Management Committee has following rights and duties:

4.1. To develop a regulation on interest rate risk management and seek approvals from the Board and introduce proposed amendments to the regulation to the Board. (the following shall be regulated by the regulation: a method to determine interest rate risk, mechanism of interest rate risk information, approaches to reduce interest rate risk, supervision by the internal control unit, regulation on inspection, regulation on auditor involvement in the inspection process of interest rate risk and employee task schedule.)

4.2. To submit a report on the level of interest rate risk of banks, procedures for proper management and their results to the Board at least twice a year,

4.3. To impose restrictions on particular activities that contain interest rate risk.

4.4. To choose among options of different approaches to reduce interest rate risk, e.g. futures, option, interest rate swap, cap, floor and corridor or use them simultaneously

4.5. Asset and liability Management Committee shall approve the structure of the report of the Interest rate risk submitted to the Board and determine the frequency of the report submission.

4.6. To appoint a specialized officer by each function of the work according to the regulation on Interest rate risk management

4.7. The level of interest risk of the bank can be determined according to the methods stipulated in the Appendix of this guideline.

FOUR. Rights and Duties of Internal Control Unit

5. Internal control unit conducts an examination on Interest rate risk at least once a year and reports the results to the Board.
6. Relations arising out of imposing corrections for violations occurred during inspections and imposing sanctions against an officer who committed violation shall be regulated by the Banking Law and other related acts.

FIVE. MONITORING OF BANK OF MONGOLIA

7. The Bank monitors the enforcement of the regulation on interest rate risk management.

SIX. AUDIT

10. Auditor shall include facts related to the level of interest rate risk in the financial report of the bank and its conclusion of the fact document.

11. The Board may allow an auditor by a contract to be engaged in the inspection process of interest rate risk, if needed.

APPENDIX

METHODOLOGIES OF INTEREST RATE RISK MEASUREMENT

ONE. GAP is the difference between interest rate sensitivity assets and liabilities.

$$GAP = Interest\ rate\ sensitivity\ assets\ -\ Interest\ rate\ sensitivity\ liabilities$$

Also, interest sensitivity gap can be calculated as following ratio:

$$GAP = \frac{Interest\ rate\ sensitivity\ assets}{Interest\ rate\ sensitivity\ liabilities}$$

Interest rate sensitivity assets include following items:

a. Loans
b. Securities
c. Other

Interest rate sensitivity liabilities include following items:

a. Interest bearing customer accounts
b. Deposits or Savings
c. Certificate of Deposit
d. Other securities issued by the Bank
e. Debts from other financial institutions
f. Other

Compound GAP (CG) is the sum of interest gaps from 1 to n-th period.

$$CG = \sum_{i=1}^{n} Gap = Gap_1 + ... + Gap_{ni}$$

Net interest margin (NIM) is the ratio of the difference between interest income and interest expense liabilities (net interest income) divided by income bearing assets.

$$NIM = \frac{Interest\ incmoe\ bearing\ assets - Interest\ \exp ense\ bearing\ liabilities}{Income\ assets}$$

Net interest income change is:

$$\Delta NIM = \Delta k \times CG$$

where

ΔNIM – Net interest income change
Δk – interest rate change

TWO. Duration also measures the average life of duration of assets and liabilities weighted by present value of
their cash flows.

$$Duration = \frac{\sum_{i=1}^{n} \frac{C_i}{(1+i)^t} \times t_i}{\sum_{i=1}^{1} \frac{C_i}{(1+i)^t}} = \frac{\frac{C_i}{(1+i)^1} \times 1 + ... + \frac{C_{in}}{(1+i)_n} \times n}{\frac{C_i}{(1+i)^1} + ... + \frac{C_i}{(1+i)^n}}$$

where

C_t – cash flow at *t*-th period
i – interest rate

2.1. Average duration of total assets and total liabilities:

$$D_A = \frac{\sum_{i=1}^{n} A_i \times Duration_i}{\sum_{i=1}^{1} TA}$$

where D_A

D_A – Average duration of total assets
A_A – i-th asset
$Duration_i$ – Average duration of i-th asset
TA – Interest sensitivity assets

$$D_L = \frac{\sum_{i=1}^{n} L_i \times Duration_i}{\sum_{i=1}^{1} TL}$$

where

D_A – Average duration of total liabilities
A_A – i-th liability
$Duration_i$ – Average duration of i-th liability
TL – Interest sensitivity liabilities

2.2. Duration disbalance is

$$DD = D_A - D_L \times \frac{TL}{TA}$$

THREE. Prudential ratios

3.1. The difference between interest sensitivity assets and liabilities shall not exceed over capital of the bank.

$$\frac{CG}{CA} \times 100\% < 20\%$$

where CA – capital

3.2. The difference between average durations of assets and liabilities shall not exceed 30 percent of total assets' average duration.

$$\frac{DD}{D_A} \times 100\% < 30\%$$